

CLAIMS:

What is claimed is:

1. An instant message (IM) interface configured to extend a target application over an IM link of a communication network, the IM interface comprising:

5 a communication interface configured to transfer a reply IM to an originating application; and

a processing system configured to obtain data from the target application, provide an output form to a messaging Application Programming Interface (messaging API), with the output form being provided from a set of Forms Definition Language (FDL) forms, 10 with the messaging API being substantially protocol-dependent and with the set of FDL forms being protocol-independent, and generate the reply IM in an originating application protocol using the data, the output form, and one or more protocol-specific libraries of the messaging API, with the reply IM comprising an originating application protocol-specific IM.

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2. The IM interface of claim 1, with the communication interface being further configured to receive an IM from the originating application, with the IM requesting a target application transaction and wherein the data is obtained in response to the IM.

3. The IM interface of claim 1, with the communication interface being further configured to receive an IM from the originating application, with the IM requesting a target application transaction and wherein the data is obtained in response to the IM, and with the communication interface being further configured to transfer an input request  
5 form IM to the originating application in response to the IM; and  
with the processing system being further configured to select an input form in the messaging API from a set of Forms Definition Language (FDL) forms in response to the IM and generate the input request form IM in the messaging API and using the input form and the one or more protocol-specific libraries, wherein the input request form IM  
10 requests and accepts input data related to the target application transaction.
  
4. The IM interface of claim 1, wherein the communication network comprises an IM communication network.  
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5. The IM interface of claim 1, with the processing system being further configured to encrypt the target protocol IM to create an encrypted target protocol IM.
  
6. The IM interface of claim 1, wherein the target application protocol comprises eXtensible Messaging and Presence Protocol (XMPP).  
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7. The IM interface of claim 1, with the obtaining data comprising:
  - generating a target protocol data request message in a target application protocol using the output form and one or more protocol-specific libraries of the messaging API, with the target protocol data request message comprising a target application protocol-specific transaction request;
  - receiving a reply message from the target application in response to the target protocol data request message;
  - generating a reply IM from the reply message using the one or more protocol-specific libraries, wherein the reply IM includes target application reply data from the target application; and
  - transferring the reply IM to the originating application.

8. The IM interface of claim 1, wherein the output form is selected and provided by an IM interface.

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9. The IM interface of claim 1, wherein the output form is provided by the originating application.

10. A method for extending a target application over an Instant Message (IM) link of a communication network, the method comprising:
  - obtaining data from the target application;
  - providing an output form to a messaging Application Programming Interface (messaging API), with the output form being provided from a set of Forms Definition Language (FDL) forms, with the messaging API being substantially protocol-dependent and with the set of FDL forms being protocol-independent;
  - generating a reply IM in an originating application protocol using the data, the output form, and one or more protocol-specific libraries of the messaging API, with the reply IM comprising an originating application protocol-specific instant message; and
  - transferring the reply IM to the originating application.

11. The method of claim 10, wherein the communication network comprises an IM communication network.

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12. The method of claim 10, further comprising encrypting the reply IM to create an encrypted reply IM.

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13. The method of claim 10, wherein the originating application protocol comprises eXtensible Messaging and Presence Protocol (XMPP).

14. The method of claim 10, wherein the output form is selected and provided by an IM interface.

15. The method of claim 10, wherein the output form is provided by the originating application.

16. A method for extending a target application over an Instant Message (IM) link of a communication network, the method comprising:
  - receiving an IM in a messaging Application Programming Interface (messaging API) from an originating application, with the IM requesting a target application
  - 5 transaction;
  - obtaining data requested in the IM;
  - providing an output form to the messaging API, with the output form being provided from a set of Forms Definition Language (FDL) forms, with the messaging API being substantially protocol-dependent and with the set of FDL forms being protocol-
  - 10 independent;
  - generating a reply IM in an originating application protocol using the data, the output form, and one or more protocol-specific libraries of the messaging API, with the reply IM comprising an originating application protocol-specific instant message; and
  - transferring the reply IM to the originating application.
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17. The method of claim 16, wherein the communication network comprises an IM communication network.
18. The method of claim 16, further comprising encrypting the reply IM to create an encrypted reply IM.
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19. The method of claim 16, wherein the originating application protocol comprises eXtensible Messaging and Presence Protocol (XMPP).

20. The method of claim 16, with the obtaining data comprising:
  - generating a target protocol data request message in a target application protocol using the output form and one or more protocol-specific libraries of the messaging API,
  - 5 with the target protocol data request message comprising a target application protocol-specific transaction request;
  - receiving a reply message from the target application in response to the target protocol data request message;
  - generating a reply IM from the reply message using the one or more protocol-specific libraries, wherein the reply IM includes target application reply data from the target application; and
  - 10 transferring the reply IM to the originating application.
21. The method of claim 16, wherein the output form is selected and provided by an IM interface.
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22. The method of claim 16, wherein the output form is provided by the originating application.

23. A method for extending a target application over an Instant Message (IM) link of a communication network, the method comprising:
- receiving a first IM in a messaging Application Programming Interface (messaging API) from an originating application, with the first IM requesting a target application transaction;
- selecting an input form in the messaging API from a set of Forms Definition Language (FDL) forms in response to the first IM, with the messaging API being substantially protocol-dependent and with the set of FDL forms being protocol-independent;
- generating an input request form IM in the messaging API using the input form and one or more protocol-specific libraries, wherein the input request form IM requests and accepts input data related to the target application transaction;
- transferring the input request form IM to the originating application;
- receiving a second IM in the messaging API in response to the input request form IM;
- obtaining data requested in the second IM;
- providing an output form to the messaging API, with the output form being provided from the set of FDL forms;
- generating a reply IM in an originating application protocol using the data, the output form, and the one or more protocol-specific libraries of the messaging API, with the reply IM comprising an originating application protocol-specific instant message; and
- transferring the reply IM to the originating application.

24. The method of claim 23, wherein the communication network comprises an IM communication network.

25. The method of claim 23, further comprising encrypting the reply IM to create  
5 an encrypted reply IM.

26. The method of claim 23, wherein the originating application protocol  
comprises eXtensible Messaging and Presence Protocol (XMPP).

10 27. The method of claim 23, with the obtaining data comprising:  
generating a target protocol data request message in a target application protocol  
using the output form and one or more protocol-specific libraries of the messaging API,  
with the target protocol data request message comprising a target application protocol-  
specific transaction request;

15 receiving a reply message from the target application in response to the target  
protocol data request message;

generating a reply IM from the reply message using the one or more protocol-  
specific libraries, wherein the reply IM includes target application reply data from the  
target application; and

20 transferring the reply IM to the originating application.

28. The method of claim 23, wherein the output form is selected and provided by  
an IM interface.

29. The method of claim 23, wherein the output form is provided by the originating application.